(i) Lockers of less than two tons each, containing medicine, linen, mops, or other items for the free use of the crew.

(ii) A ship's office.

(iii) Spare rooms (not exceeding two) used by a pilot, customs officer, reserve engineer, or employee or agent of the vessel's owner or operator.

(p) *Markings for deductible spaces.* (1) Each space deducted under this section must be marked with the words ''Certified _____'' (inserting the space designation, such as ''Seaman'', ''Generator'', Office of Chief Engineer'', ''Hospital'', or ''Anchor Gear''). If a deductible space berths more than one crew member, the marking must indicate the number of crew members berthed, such as ''Certified _____ Seamen'' (inserting the number of crew).

(2) The abbreviations ''Cert.'' for ''certified'' and ''W.C.'' for ''water closet'' may be used.

(3) The markings must be in Roman letters and Arabic numerals at least ½ inch in height, must be painted in a light color on a dark background, must be embossed, center-punched, carved, or permanently cut in a bulkhead or metal plate, and must be placed in a legible location over a doorway on the inside of the space. A metal plate, if used, must be permanently fastened in place by welding, riveting, lock screws, or a Coast Guard-approved bonding agent.

(q) *Method for measuring deductible spaces.* (1) A rectangular space must be measured by taking the product of its length, breadth, and height.

(2) A space with curved sides on or above the tonnage deck is measured according to §69.109.

(3) Space less than 15 feet in length may be measured by any practical method.

(4) Spaces below the tonnage deck exceeding 15 feet in length and bounded by a curved surface conforming to the side of the vessel must be measured by the formula used for measuring the superstructure under §69.113.

(5) The height of a space located on a platform in the hull must be measured from the top of the bottom hull frames, if the platform is used only to form a flat surface at the bottom of the space, if the platform is not more than one foot above the top of the bottom frames, and if the space below the platform is not usable.

(6) The height of a space is measured through any ceiling, paneling, false overhead, or other covering, to the space's structural boundary, unless the space enclosed by the covering is available for a non-deductible use.

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§69.121 Engine room deduction.

(a) *General.* The engine room deduction is either a percentage of the vessel's total propelling machinery spaces or a percentage of the vessel's gross tonnage.

(b) *Propelling machinery spaces.* (1) Propelling machinery spaces are the spaces occupied by the main propelling machinery and auxiliary machinery and spaces reasonably necessary for the operation and maintenance of the machinery. Propelling machinery spaces do not include spaces for fuel tanks, spaces exempt from gross tonnage under §69.117, and spaces not used or not available for use in connection with the propelling machinery.

(2) Propelling machinery spaces are—

(i) Space below the crown. The crown is the top of the main space of the engine room to which the heights of the main space are taken. The crown is either the underside of a deck or, if the side bulkheads are sloping, the uppermost point at which the slope terminates. (See §69.123, figures 13 and 14.)

(ii) Framed-in space located between the crown and the uppermost complete deck and used for propelling machinery or for the admission of light or air to propelling machinery spaces. (See §69.123, figures 13 and 14.)

(iii) Shaft tunnel space and thrust block recess space.

(iv) Space below the uppermost complete deck used for escape shafts or trunked ladderways leading from the aft end of the shaft tunnel to the deck above.

(v) Space containing a fuel oil transfer pump located in a separate space and not used for bunkering the vessel. When the pump serves both ballast and fuel oil, only one-half of the pump's

space is considered a propelling machinery space.

(vi) Spaces containing fuel oil settling tanks used solely for the main boilers. The space must not exceed one percent of the vessel's gross tonnage.

(vii) Spaces for engineers' stores and workshops located below the uppermost complete deck and either open to a propelling machinery space or separated from a propelling machinery space only by a screen bulkhead. The space must not exceed three-quarters of one percent of the vessel's gross tonnage.

(viii) Framed-in space located above the line of the uppermost complete deck and used for propelling machinery or for the admission of light or air to a propelling machinery space, when requested under paragraph (d) of this section.

(ix) If the propelling machinery is boxed-in below the tonnage deck, the boxed-in space plus the spaces outside of the boxing for the shaft, auxiliary engines, and related propelling machinery. If a portion of the boxed-in space extends above a platform or partial deck that is below the uppermost complete deck, that portion is also considered part of the propelling machinery space.

(c) *Methods for measuring propelling machinery spaces.* (1) If the propelling machinery space is bulkheaded off or is not larger than necessary for the safe operation and maintenance of the propelling machinery, the entire space, or, if bulkheaded off, the portion bulkheaded off, is measured for the engine room deduction.

(2) If the propelling machinery space is not bulkheaded off or is larger than necessary for the safe operation and maintenance of the propelling machinery, only the space occupied by the propelling machinery itself plus a working space of two feet, if available, on each side of the propelling machinery is measured for the engine room deduction. If the working space overlaps another working space not related to the propelling machinery, only one-half of the overlapping working space is included in the propelling machinery space. The height of the working space is measured as provided in paragraph (c) of this section.

(3) If the propelling machinery is located in more than one space, each space must be measured separately.

(4) If the propelling machinery is located in a space with a step in the bottom or side lines, each stepped portion of the space must be measured separately.

(5) The length of a space under paragraph (c)(1) of this section is measured from the bulkhead just forward of the propelling machinery to the bulkhead just aft of the propelling machinery. The length of a space under paragraph (c)(2) of this section is measured from the forward edge of the working space to the aft edge of the working space.

(6) If the boundaries of the propelling machinery space form a rectangle, the product of the length, breadth, and height, divided by 100, is the tonnage of the space.

(7) If the boundaries of the propelling machinery space are continuous fair lines, heights are measured at the fore and aft ends and at the center of the space from the bottom frames, floors, or tank top of a double bottom up to the line of the crown. A breadth is measured at half-height of each height. The product of the length, mean breadth, and mean height, divided by 100, is the tonnage of the space.

(8) If the propelling machinery space is in the aft end of the hull, extends from side to side of the hull, and has a continuous bottom line, the length of the space is divided into the even number of equal parts most nearly equal to the number of parts that the tonnage length under §69.109(g) was divided. The tonnage is then calculated by the same method used for calculating the under-deck tonnage in §69.109(l).

(9) The tonnage of a framed-in space located between the crown and the uppermost complete deck and used for propelling machinery or for the admission of light or air to the propelling machinery space, is the product of its length, breadth, and height, divided by 100.

(10) The tonnage of a shaft tunnel, or a thrust block recess, having a flat top is the product of its length, breadth, and height, divided by 100. If the shaft tunnel or thrust block recess top is not

flat, the space above must be calculated by using the appropriate geometrical formula. If the space aft of the shaft tunnel extends from side to side of the vessel, the tonnage of the space is found by the formula for measuring peak tanks in § 69.109(l).

(11) The length and breadth of the space for a shaft tunnel, or a thrust block recess, when not cased is that which is necessary for maintenance of the shaft. The height allowed for thrust block recess space must not exceed seven feet. The mean height allowed for the shaft tunnel space must not exceed six feet. In a multi-screw vessel where the shaft tunnel or thrust block recess space is open from side to side, measure only the space used for purposes of propelling the vessel.

(12) When the propelling machinery is on a bed at the vessel's bottom, the height of the propelling machinery space is measured from the top of the bottom frames or floors.

(d) *Request to treat certain framed-in engine room spaces as part of a propelling machinery space.* (1) Under § 69.117(b)(4), framed-in spaces located above the line of the uppermost complete deck and used for propelling machinery or for admitting light or air to a propelling machinery space are exempt from inclusion in gross tonnage. However, upon written request to a measurement organization listed in § 69.15, the vessel owner may elect to have these spaces included in calculating gross tonnage, then deducted from gross tonnage as propelling machinery spaces under paragraph (b)(2)(viii) of this section.

(2) The framed-in space must be safe, seaworthy, and used only for propelling machinery or for the admission of light or air to the propelling machinery space. The length of the space must not exceed the length of the propelling machinery space and the breadth must not exceed one-half of the extreme inside midship breadth of the vessel. Portions of the framed-in space that are plated over are not included in the propelling machinery space.

(3) To exercise the option in paragraph (d)(1) of this section, all of the framed-in space need not be treated as propelling machinery space, but only that portion required to entitle the vessel to have 32 percent of its gross tonnage deducted as an engine room deduction under paragraph (e) of this section.

(e) *Calculating the engine room deduction.* (1) The engine room deduction is based on a percentage of the vessel's gross tonnage or a percentage of the total propelling machinery space.

(2) For vessels propelled in whole or in part by screw—

(i) If the total propelling machinery space is 13 percent or less of the vessel's gross tonnage, deduct $3\frac{2}{13}$ times the total propelling machinery space;

(ii) If the total propelling machinery space is more than 13 but less than 20 percent of the vessel's gross tonnage, deduct 32 percent of the vessel's gross tonnage; or

(iii) If the total propelling machinery space is 20 percent or more of the vessel's gross tonnage, deduct either 32 percent of the vessel's gross tonnage or 1.75 times the total propelling machinery space, whichever the vessel's owner elects.

(3) For vessels propelled in whole or in part by paddle-wheel—

(i) If the total propelling machinery space is 20 percent or less of the vessel's gross tonnage, deduct $3\frac{7}{20}$ times the total propelling machinery space;

(ii) If the total propelling machinery space is more than 20 but less than 30 percent of the vessel's gross tonnage, deduct 37 percent of the vessel's gross tonnage; or

(iii) If the total propelling machinery space is 30 percent or more of the vessel's gross tonnage, deduct either 37 percent of the vessel's gross tonnage or 1.5 times the total propelling machinery space, whichever the vessel's owner elects.

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